

REMARKS

Reconsideration of the rejection of claims is respectfully requested in the light of the following remarks and authorities. Claim 17 has been amended to correct a minor informality without being narrowed. Claims 1-16 and 18-48 are presented without amendment for reconsideration in the light of the following remarks and authorities.

1, 2. Claims 1-8, 14-20, 24-34, 36 and 40-42 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The claims are said to contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains or with which it is most nearly connected to make and/or use the invention.

The present invention is said to be a device as said to be shown in FIG. 1 for broad interpretation for processing a single channel input to generate a 5-channel output, with specific reference to elected FIG. 2B and combining the 5-channel output to produce a 3-channel output, with specific reference to elected FIG. 3C. Signal path 22C in FIG. 3C is said to be a center channel having a spectral pattern representing speech. However, FIG. 2B as said to be explained by the specification as originally filed is said to fail to show how to obtain signal path 22C having a spectral pattern representing speech. Signal path 22C is said to be a product of the input signal M multiplied by factor α and another factor 1.414. This product is said to have a spectral pattern of audio frequency in the original input signal. Applying the signal path 22C as said to be shown in FIG. 2B to the input of signal path 22C in FIG. 3C it is said would not produce the invention as intended. The intended invention is said to provide the signal within the speech spectrum to the center channel and the rest of the signal is said to being delayed and then generated by other channels. Therefore, it is said the specification as originally filed fails to provide an enabling description to enable one skilled in the art to which it pertains, or which it is most nearly connected, to make and/or use the invention.

The Office Action states:

Applicant argued that the specification as originally does provide enablement [sic].

It is noticed that the 112, 1st paragraph rejection is based on the claimed limitation "a first separated signal characterized by a spectral pattern generally characteristic of speech". The examiner pointed out in the last office action that the specification as originally filed fails to provide an enablement for this limitation. A spectral pattern generally characteristic of speech means the signal having/falling in a general speech spectrum. Applicant explained how to obtain this spectral pattern using the multiplier (55) in Fig. 2b. Applicant discussed two scenarios. One is in which the input signal (M) is a speech and the other one is in which the input signal (M) does not have any content in speech. Examiner would like to know what will happen if the input signal has content in both speech and nonspeech. By using the multiplier as disclosed in the specification as originally filed, the output to the center channel will be the signal in same spectral content (i.e. including speech and nonspeech) multiplied by 1.414α , not just the speech signal alone as intended (p. 7, line 20). Therefore, the previous 112, 1st paragraph rejection still valid. Office Action, p. 6.

A basic fallacy in the Examiner's rejection is failing to identify any limitation in the claim that is not enabled. Clearly, the structure illustrated in FIGS. 2A and 2B disclose separating the single channel audio signal into a first separated signal characterized by a spectral pattern generally characteristic of speech and a second separated signal, processing the first separated signal to provide a first audio channel signal, such as on line 22C and modifying the second separated signal to produce the remainder of the plurality of audio-channel signals, such as on 22L, 22R, 22L_s and 22R_s.

Under the heading "Burden on the Examiner Under the Enablement Requirement" M.P.E.P. 2164.04 provides,

In order to make a rejection, the Examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) (Examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure.) A specification disclosure which contains a teaching of the manner and process of making and using an invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as being in compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, unless there is a reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. Assuming that sufficient reason for such doubt exists, a rejection for failure to teach how to make and/or use will be proper on that basis. *In re Marzocchi*, 439 F.2d 220, 224 169

USPQ 367, 370 (CCPA 1971). As stated by the court, 'it is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain *why* it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively accurate disclosure. 439 F.2d at 224, 169 USPQ at 370. MPEP, p. 2100-183.

Manifestly, the Examiner has failed to explain why she doubts the truth or accuracy of any statement in this disclosure and back up her assertions of her own with acceptable evidence or reasoning which is inconsistent with any statement in the disclosure.

Accordingly, withdrawal of the rejection of claims 1-8, 14-20, 24-34, 36 and 40-42 as not enabled is respectfully requested.

3, 4. Claim 17 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 recites the limitation "said variable gain" (first occurrence) in line 3. There is insufficient antecedent basis for this limitation in the claim. The claim has been amended without being narrowed by deleting "said" from "said variable gain" (first occurrence) in line 3. Accordingly, withdrawal of the rejection of claim 17 under 35 U.S.C. 112, second paragraph, is respectfully requested.

5, 6. Claims 1, 6, 8, 14, 18 and 20 stand rejected under 35 U.S.C. §102(b) as being anticipated by Shiraki. Regarding claims 1, 6, 8, 14, 18 and 20, the reference is said to disclose an audio signal processing apparatus for processing a single-channel audio signal to provide a plurality of audio channel signals comprising a separator for separating the audio signal (said to be after 7) to a first separated signal (to 11) and a second separated signal (to 12, 13), a first circuit (12, 13) and a processing step (by 11) to provide a first audio channel signal. This ground of rejection is respectfully traversed.

We rely on the authorities set forth on pages 13-15 of the response filed on September 10, 2003. The reference must disclose each and every element set forth in a rejected claim arranged as in the claim.

The reference processes a two-channel audio signal.

The reference processes a two-channel audio signal.

The reference does not disclose a second separated signal to produce a remainder of a plurality of audio channel signals called for by claims 1, 6 and 8. Nor does the reference disclose the second separated signal called for by claims 14, 18 and 20. If this ground of rejection were repeated, the Examiner was respectfully requested to quote verbatim the language in the reference regarded as corresponding to each element in each of these rejected claims. The Examiner did not and can not comply with this request. Accordingly, withdrawal of the rejection of claims 1, 6, 8, 14, 18 and 20 as anticipated by the reference is respectfully requested. If this ground of rejection is repeated, the Examiner is again respectfully requested to quote verbatim the language in the reference corresponding to each limitation in each rejected claim, and at least the second separated signal.

7, 8. Claims 2 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shiraki as a primary reference in view of Edvardson as a secondary reference. Regarding claims 2 and 16, the primary reference is said to show an amplifier (17 or 18), but is said to fail to explicitly show a multiplier. The amplifier as said to be taught by the primary reference is said to mathematically perform multiplication of the input signal. The secondary reference is said to teach an amplifier performing multiplication (col. 4, lines 55-56) with improved power handling and long term reliability. The primary reference is said to teach a system using a general amplifier, wherein one skilled in the art would have expected that any well-known amplifier could be used without generating any unexpected result. Thus, it is said it would have been obvious to one of ordinary skill in the art to modify the primary reference by using the amplifier as said to be taught by the secondary reference in order to improve amplifier performance and increase the long term reliability.

This ground of rejection is respectfully traversed.

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

"Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, '[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.'" *In re Laskowski*, 10 U.S.P.Q. 2d 1397, 1398 (Fed. Cir. 1989).

"The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984).

"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so." *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984) (emphasis in original, footnotes omitted).

"The critical inquiry is whether 'there is something in the prior art as a whole *to suggest* the desirability, and thus the obviousness, of making the combination. [citing *Lindemann* with emphasis added.]" *Fromson v. Advance Offset Plate, Inc.*, 225 U.S.P.Q. 26, 31 (Fed. Cir. 1985).

As the Federal Circuit Court of Appeals said in *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999):

Close adherence to this methodology is especially important of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.'

And in *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000), the Court said:

[I]dentification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See id.* [*Dembiczak*]. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. *See In re Dance*, 160 F.3d 1339, 1343, 48 U.S.P.Q.2d 1635, 1637

(Fed. Cir. 1998), *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. *See B. F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 U.S.P.Q.2d 1314, 1318 (Fed. Cir. 1996).

Claims 2 and 16 are dependent upon and include all the limitations of claims 1 and 14, respectively. We have shown above that the reference processes a two-channel signal and fails to disclose the second separated signal called for by these claims, and nothing in the references discloses or suggests dividing the nonexistent second separated signal into a plurality of signals and multiplying one of the latter signals by a predetermined factor as called for by claim 2 or discloses a first circuit coupled to the separator responsive to the nonexistent second separated signal for providing a first subset of the plurality of audio channel signals coupled to the speech separator having multiple signal paths, with at least one of the multiple signal paths comprising a multiplier as called for by claim 16. It is therefore impossible to combine the references to meet the terms of claims 2 and 16.

"Moreover, we observe that even if these references were combined in the manner proposed by the examiner, that which is set forth in appellant's claims . . . would not result." *Ex parte Bogar*, slip op. p.7 (BPA&I Appeal No. 87-2462, October 27, 1989). "Even if we were to agree with the examiner that it would have been obvious to combine the reference teachings in the manner proposed, the resulting package still would not comprise zipper closure material that terminates short of the end of the one edge of the product containing area, as now claimed." *Ex parte Schwarz*, slip op. p.5 (BPA&I Appeal No. 92-2629 October 28, 1992). "Although we find nothing before us indicating why it would be desired to combine the references in the manner urged by the examiner, it is clear to us that such a modification by itself would not result in that which is set forth in the claims." *Ex Parte Kusko*, 215 U.S.P.Q. 972, 974 (BPA&I 1981).

That it is impossible to combine the primary and secondary references to meet the limitations of claims 2 and 16 is reason enough for withdrawing the rejection of them on the primary and secondary references. Nothing in the primary and secondary references suggests the desirability of combining what is there disclosed to meet the terms of the rejected claims.

Accordingly, withdrawal of the rejection of claims 2 and 16 as unpatentable over the primary and secondary references is respectfully requested. If this ground of rejection is repeated, the Examiner is respectfully requested to quote verbatim the language in the references regarded as corresponding to each element in claims 2 and 16 and quote verbatim the language in the references regarded as suggesting the desirability of combining what is there disclosed to meet the limitations of these claims.

9. The Examiner states that we argued the election of species 7 in paper No. 9 without traverse. While we did not understand the basis for the requirement for restriction, since all the claims read on what the Examiner identifies as species 7, the requirement for restriction was moot, and our election specifically identified all the claims as reading on species 7. In any event, claims 1, 14 and 24 are generic, allowable in the absence of pertinent prior art and read on all embodiments. Accordingly, withdrawal of the requirement for restriction is again respectfully requested.

Regarding enablement, we have set forth above why the Examiner has failed to meet her burden of showing absence of enablement. The discussion regarding speech and nonspeech is irrelevant to what is disclosed and claimed in this application. The claim limitations relate to a first separated signal characterized by a spectral pattern generally characteristic of speech. The disclosure on page 4 of the application clearly discloses how to make and use the invention, and the Examiner has never contended otherwise.

Regarding Shiraki, the reference does not disclose processing a single channel signal. The reference discloses a two-channel signal, L and R, with each of these two signals having added to each a difference signal.

In view of the foregoing amendment, authorities, remarks and the inability of the prior art, alone or in combination, to anticipate, suggest or make obvious the subject matter as a whole of the invention disclosed and claimed in this application, all the claims are submitted to be in a condition for allowance, and notice thereof is respectfully requested. Should the Examiner believe the application is not in a condition for allowance, she is respectfully requested to

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telephone the undersigned attorney at (617) 521-7014 to discuss what additional steps she believes are necessary to place the application in a condition for allowance.

Enclosed is a \$420.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050, Order No. 02103-347001.

Respectfully submitted,

FISH & RICHARDSON P.C.

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